CPP 程式設計題

命題者：SCY	

題目名稱(中文/英文)：Class Point in plane

主要測試觀念： Class member function

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題目說明：The type Point is a fairly simple data type, but under another name (the template class pair) this data type is defined and used in the C++ Standard Template Library, although you need not know anything about the Standard Template Library to do this exercise. Write a definition of a class named **Point** that might be used to store and manipulate the location of a point in the plane. You will need to declare and implement the following member functions:

a. A member function set that sets the private data after an object of this class is created.

b. A member function to move the point by an amount along the vertical and horizontal directions specified by the first and second arguments.

c. A member function to rotate the point by 90 degrees clockwise around the origin.

d. Two const inspector functions to retrieve the current coordinates of the point.

Document these functions with appropriate comments. Embed your class in a test program that requests data for several points from the user, creates the points, then exercises the member functions.

輸入說明：input-main1.cpp
輸出說明：as output from input-main1.cpp
IO 範例 ：

	Sample Input	Sample Output
第一組測資與輸出	input-main1.cpp	0 5 1 7 7 -1 -1 -7

		-7 1
		1 7
第二組	input-main2.cpp	5 -20
		3 -2
		4 0
		5 25
		8 10
		10 -8
		-8 -10
		-10 8
		8 10
第三組		

附屬資料：
☑解答程式：ClassPointInPlane.cpp(檔名)
☑測試資料：input.txt, output.txt

□易，僅需用到基礎程式設計語法與結構

■中，需用到多項程式設計語法與結構

□難，需用到多項程式結構或較為複雜之資料型態或結構

解題時間：20 分鐘。

其他註記：